

SAFETY OF LIFE AT SEA

REPORT
ON THE
YARMOUTH CASTLE DISASTER

COMMITTEE ON
MERCHANT MARINE AND FISHERIES
U.S. HOUSE OF REPRESENTATIVES

[Pursuant to H. Res. 151 (89th Congress, 1st Sess.)]



APRIL 20, 1966.—Committed to the Committee of the Whole House
on the State of the Union and ordered to be printed.

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REPORT

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LETTER OF TRANSMITTAL

APRIL 19, 1966.

HON. JOHN W. McCORMACK,
Speaker of the House,
U.S. House of Representatives, Washington, D.C.

DEAR MR. SPEAKER: There is transmitted herewith a report of the Committee on Merchant Marine and Fisheries, which was this day ordered reported pursuant to House Resolution 151, by the full committee in executive session.

Sincerely,

EDWARD A. GARMATZ, *Chairman.*

BACKGROUND OF REPORT

Pursuant to House Resolution 151, your committee appointed a special staff of technical advisers, referred to as "Board of Consultants", to assist in the conduct of studies and investigations relating to matters involving safety of life at sea. Specifically, the Board of Consultants were requested to make a study of the tragic loss by fire of the Caribbean cruise ship, SS *Yarmouth Castle*, on November 13, 1965, and to report thereon with suggestions and recommendations designed to lead to improved safety standards for passenger ships.

The Board of Consultants consists of Rear Adm. Halert C. Shephard, USCG, retired; Comdr. Edward M. Webster, USCG, Retired; and Herbert Lee Seward, emeritus professor of mechanical and marine engineering, Yale University.

At an executive session of the full committee today the Board of Consultants presented the report of their studies and investigations. After consideration and full discussion, your committee accepted the report, approved and adopted same, and unanimously ordered it reported to the House. The Board of Consultants' letter of submittal of April 11, 1966, and their report follow:

LETTER OF SUBMITTAL

WASHINGTON, D.C., April 11, 1966:

HON. EDWARD A. GARMATZ,
*Chairman, Committee on Merchant Marine and Fisheries,
U.S. House of Representatives, Washington, D.C.*

DEAR MR. GARMATZ: We the undersigned, having been requested by you to make a study of the *Yarmouth Castle* disaster which occurred on November 13, 1965, and other relevant matters which may lead to improved safety standards for passenger ships, submit the attached report.

We recognize the knowledgeability of yourself and the members of your Merchant Marine and Fisheries Committee in the field of merchant marine safety, so if we have covered areas in some detail with which we know you are already cognizant, it is done for such benefit as it may be to your colleagues who are not members of your committee.

Admittedly any action proposed to prevent such disasters to foreign-flag passenger ships with tragic loss of life is certain to be controversial. The problem is involved and poses far-reaching implications. We regret that our recommendations do not contain any suggested action which may be taken that would give you positive assurance that similar disasters on foreign-flag ships will not occur in the foreseeable future. However, we have set forth recommendations which, if followed, would eventually provide safety equivalent to that of U.S. passenger ships plying the high seas upon which holocausts such as the *Yarmouth Castle* are most unlikely.

We advocate the construction of new foreign passenger ships which would give the assurance desired, and elimination or upgrading of existing foreign passenger vessels which would greatly lessen the possibility of destruction of these ships by fire.

Respectfully submitted.

H. L. SEWARD,
*Emeritus Professor of Mechanical and Marine Engineering, Yale
University.*

H. C. SHEPHEARD,
Rear Admiral, U.S.C.G., Retired.

E. M. WEBSTER,
Commodore, U.S.C.G., Retired.

Union Calendar No. 626

89 TH CONGRESS <i>2d Session</i>	}	HOUSE OF REPRESENTATIVES	}	REPORT No. 1445
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SAFETY OF LIFE AT SEA

REPORT ON THE YARMOUTH CASTLE DISASTER

APRIL 20, 1966.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. Garmatz, from the Committee on Merchant Marine and Fisheries, submitted the following

R E P O R T

[Pursuant to H. Res. 151 (89th Cong., 1st sess.)]

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Union Calendar No. 626

HOUSE OF REPRESENTATIVES
REPORT
OF THE

SAFETY OF LIFE AT SEA

REPORT ON THE YARMOUTH CASTLE DISASTER

APRIL 26, 1906.—(Submitted to the Committee on Merchant Marine and Fisheries
of the House of Representatives and ordered to be printed.)

THE COMMITTEE ON MERCHANT MARINE AND FISHERIES
OF THE HOUSE OF REPRESENTATIVES
SUBMITTED THE FOLLOWING

REPORT

TO THE HOUSE OF REPRESENTATIVES

I. INTRODUCTION

On November 13, 1965 the Panamanian passenger ship *SS Yarmouth Castle*, sailed from Miami, Fla., bound for Nassau, British West Indies, with 376 passengers and crew of 176 of various nationalities. At about 1 a.m., on the 14th, about 8 hours out of Miami and 60 miles from Nassau, fire was discovered which ultimately resulted in the loss of 88 passengers and 2 crewmen, and the sinking of the vessel. Once the plight of the ship became known to other ships in the vicinity, normal search and rescue (SAR) procedures were entered into and resulted in rescue operations of heroic and commendable proportions.

The disaster occurred to a foreign-flag ship on international waters. It was therefore not legally subject to U.S. intervention, such as an investigation by the U.S. Coast Guard. However, in recognition of its own responsibilities and the great U.S. interest involved, the Commandant, U.S. Coast Guard, with the cooperation of the Government of Panama, convened a marine board of investigation to investigate the fire and subsequent sinking of the *Yarmouth Castle*. This investigation was to determine the cause of the casualty to the extent possible, and to determine whether the casualty could have been prevented or the effects minimized, and what possible precautions might be taken to prevent a recurrence of similar casualties. Investigation by the Coast Guard was most appropriate. Most of the passengers aboard the *Yarmouth Castle* were U.S. citizens. Moreover, this casualty to a foreign-flag passenger ship created great public interest and concern in the United States due to the fact that increasingly large numbers of our citizens embark on foreign passenger ships which operate in and out of our ports.

The mission of this Board of Consultants is to assist the Merchant Marine and Fisheries Committee, House of Representatives, to appraise this latest marine tragedy. In this sense it parallels the aims and objectives of the U.S. Coast Guard. However, it is possible that some observations of interest to the committee may be made by this Board involving matters beyond the purview of the Coast Guard investigation.

II. PROCEDURE

There were available to the Board the transcripts of the Coast Guard Marine Board of Investigation, the assistance of the Coast Guard, the Federal Communications Commission, the Maritime Administration, the American Bureau of Shipping, and the plans, certificates, surveys, and inspection reports concerning the *Yarmouth Castle*. In addition, a member of this Board examined the *Yarmouth*, sister ship of the ill-fated *Yarmouth Castle*.

The studies included a review of the existing international conventions and the proceedings of certain meetings of the Intergovernmental Maritime Consultative Organization, of the U.S. regulations and practices, and of the procedures of ship classification, and their effectiveness.

III. RECOMMENDATIONS

In this report nine recommendations are to be found under the subject headings of "New ships," "Existing ships," "Operations," "Radio watches," and "Radio inspection." The accomplishment of most of these recommendations will require international agreement via amendments to the Safety of Life at Sea Convention of 1960.

Discussion of the circumstances leading to these recommendations follows in section IV.

NEW SHIPS

1. Require all future passenger ships to be constructed of fireproof, fire-resisting and fire-retardant materials specified as method I in the International Convention for Safety of Life at Sea, 1960. (Passenger and cargo ships under U.S. flag have been so constructed for going on three decades.)

2. Amend definition of "new ship" to include all passenger ships upon transfer of registry from one flag to another. (This would require compliance of vessels transferred from one flag to another to adhere to method I. This is the present U.S. practice for ships transferred to U.S. flag.)

EXISTING SHIPS

3. Eliminate the "escape" provisions available to existing ships under the general clause in chapter II of the Safety of Life at Sea Conventions which provide:

* * * the arrangements on each ship shall be considered by the Administration, with a view to improvements being made to provide increased safety where practicable and reasonable.

Many provisions of the Safety of Life at Sea Convention (SOLAS) should be specifically made mandatory, require improvements to lessen the fire hazard, that is:

(a) Enclose ~~a~~ all passenger foyers and stairways with fire-retardant material.

(b) Install fire-screen doors (bridge controlled) (fail safe method).

(c) Install automatic sprinkler systems.

(d) Install supervisory patrol systems.

(e) Install smoke detecting system.

(f) Install electric boat winches.

(g) Provide effective emergency fire squads.

(h) Special signal (alarm bell) for calling emergency squad.

(i) Eliminate highly inflammable drapes, mattresses, and furniture.

(j) Class A bulkheads in certain vulnerable locations.

(k) Passageways in accommodation spaces shall be of incombustible materials.

(l) Two practical means of escape from vessel interior.

(m) Removal of excessive paints and varnishes in and on superstructure accumulated over the years.

In general, adherence to the above items is aimed to bringing existing passenger ships into compliance with the 1948 Convention requirements for new ships without resort to "escape clauses."

OPERATIONS

4. Pending international adoption of the items to be considered mandatory, listed in 3 above, refuse clearance to those passenger ships embarking passengers in U.S. ports not in compliance with recommendation 3.

5. On existing pre-Convention ships engaged in short international voyages require a biweekly crew fire and boat drill, weather permitting, as soon as practicable after leaving port. (The Convention requires weekly crew drills on these ships on short international voyages and are normally conducted in port. At sea, under possible observation of passengers, such drills are less likely to be of a perfunctory nature and equipment more likely to be maintained in proper condition.)

6. Department of Defense to examine its dependence on substandard passenger ships for use in time of emergency.

RADIO WATCHES

7. Require that all foreign passenger ships carry at least two radio officers and maintain continuous radio listening watch while being navigated outside a harbor or port, similar to the requirements imposed by the Communications Act of 1934 on U.S. vessels.

RADIO INSPECTION

8. The Federal Communications Commission should reestablish its former practice of routine inspection of the radio installations on board both Convention and non-Convention foreign passenger ships to determine that the radio installation is in operating condition, and that the required number of radio officers is assigned.

RADIO ROOM—INACCESSIBLE OR INOPERATIVE

9. The Federal Communications Commission and the U.S. Coast Guard should jointly study the question of whether national or international requirements for the location, protection, and provision of radio equipment on passenger ships for safety purposes adequately take care of the situation where the radioroom and the equipment located therein may become inaccessible or inoperative and what additional measures, if any, should be required.

IV. DISCUSSIONS

1. PROGRESS, FIREPROOF SHIP

Historically, fire at sea has been the hazard most feared by seamen. Progress in lessening this hazard has been slow and difficult to achieve. However, with the modern techniques available in ship construction this hazard is no longer excusable.

When the *Yarmouth Castle* was built in 1927, it was constructed according to the prevailing practices and techniques of that era.

Fire resistant materials, in lieu of combustible joiner work, had not been developed and utilized for shipboard use until the midthirties. In fact steel decks or deck houses in this era were not considered an essential requirement. Thus, this ship did have a great amount of wood throughout its superstructure.

Ships, unlike warehouses and other shoreside structures, have numerous void spaces. A fire in such a space, behind paneling or overhead ceiling, can spread over a wide area before being detected. Such a fire may be out of control and beyond the capabilities of an extinguishing system prior to its discovery. Especially is this true in a ship some 38 years old such as the *Yarmouth Castle*. Void spaces accumulate dust and such dust creates a flash fire potential. There will also be an accumulation of flammable paints and varnishes employed over the many years.

The extensive use of combustible materials was prohibited in the construction of U.S. passenger ships built after 1936.

The existing U.S. passenger ships of that time were either retired, sold, or extensively overhauled. Upgrading to improve the fire-worthiness of these existing ships, employing the use of fire-resisting materials in varying degrees, was required. Also costly fire-extinguishing systems such as automatic sprinklers were required to be installed in the hope of preventing future losses by fire for the remaining years of the ship's serviceability. Although the *Yarmouth Castle* was so improved in 1947, at a cost of \$1,704,170, its destruction is a vivid example of the inadequacy of any arrangements made to detect and extinguish fires where extensive combustible materials exist. Even so, the upgrading required by the United States for its existing passenger ships was in excess of what later became international obligations for foreign shipowners under the SOLAS Convention in 1948.

At the international level (as described elsewhere), the United States sought the adoption of construction standards for fire prevention applicable to new construction which reflected those which had been required for U.S.-flag ships. As to existing vessels, efforts were made to obtain realistic upgrading of existing ships. Unfortunately, the best that could be obtained was a moral obligation expressed in terms that—

* * * the arrangements on each ship shall be considered by the Administration, with a view to improvements being made to provide increased safety where practicable and reasonable.

It is this provision of the convention that we refer to elsewhere as the "practicable and reasonable" clause. We also refer to it as an "escape clause," and it is referred to by others as "the grandfather clause."

It is necessary, as recommended herein, that the convention be amended to make mandatory certain provisions in the interest of international uniformity.

2. CAUSE OF FIRE

Even had the *Yarmouth Castle* not gone to the bottom, the actual cause of the fire might never have been determined. The important thing is to prevent a recurrence, whether it be from arson, spontaneous combustion, faulty electric wiring, or some careless smoker. The

recommendations of this Board, coupled with other recommendations of the U.S. Coast Guard following its investigation of this tragedy, will eventually lead to appropriate fireworthiness of the world's passenger fleet, but only if the lessons are heeded on an international basis.

As to the actual location of the origin of the fire, most of the evidence presented at the Coast Guard hearings was focused on room 610. It was testified that this room had had the ceiling removed and thus was partially open to the void spaces of the ship from above. It had also had the paneling removed and was said to be but a room bounded by bare steel. Allegedly, room 610 contained only vacuum cleaners and mops. If this were actually the case, the fire would have most likely originated in void spaces elsewhere in the ship, possibly from an electrical short. Since the smoke and flames would have worked their way through the void spaces until they came to an opening (such as in the overhead of room 610) this could explain why the existence of the fire would have first been discovered at that location. This would also explain how the fire could have gained considerable headway before being discovered.

However, since the electrical system of this ship was thoroughly checked out instrumentally by surveyors of the American Bureau of Shipping shortly before the disaster, this Board is inclined to place more credence in the testimony of one witness that mattresses were stored in this room together with debris such as ripped out paneling, et cetera. Under such circumstances, it is quite probable that inflammable polishes and other cleaning materials were likewise stored in room 610. There was also said to be an extension cord with bare bulb. Such a combination of miscellaneous storage with draped extension cord and bare bulb would be a fire hazard for several reasons, including that of spontaneous combustion. If so, with void spaces partially open in this room, and an opening to a light and ventilating shaft, the rapid spread of fire was inevitable. No doubt the ventilating shaft, with openings to other decks, served as an exhaust flue carrying smoke and fire to many other areas.

For the purpose of this report, there is no need to speculate on the question of arson except to comment that in the case of the loss of the U.S. passenger ship *Morro Castle* there is considerable evidence to indicate that arson might have been the cause. The objective envisioned by this Board is to have a ship so constructed that it is invulnerable to all possibilities of destruction by fire, be it arson or otherwise.

3. U.S. COAST GUARD MERCHANT MARINE SAFETY STANDARDS

The safety standards administered by the U.S. Coast Guard are recognized as the world's highest. For 30 years, all U.S. passenger ships have been built under U.S. regulations that prevent disasters at sea by fire. Prevention, rather than extinction, has been the slogan.

The Board concludes that present U.S. Coast Guard fireworthiness rules are adequate for passenger ships built for U.S.-flag, and as to requirements that must be met by a foreign passenger ship transferred to U.S.-flag.

4. CONTROL, LIMITED AUTHORITY OF COAST GUARD RE FOREIGN PASSENGER SHIPS

This Board reviewed the inspection reports of the U.S. Coast Guard on the *Yarmouth Castle* and on other foreign passenger ships operating out of U.S. ports. It found the U.S. Coast Guard in general fulfilled its responsibilities under Regulation 18 SOLAS 1948 and Regulation 19, 1960 entitled "Control."

Room 610, where the fire was believed to have started, was bounded by a steel deck, steel ceiling, and bulkheads, and apparently considered a space affording "no substantial fire risk," and perhaps such as to make it unnecessary to have a sprinkler head installed. However, when containing mattresses, wood debris, and other miscellaneous items, combined with a makeshift electric light bulb on an extension cord, it would become a serious fire risk. An example of poor housekeeping so extreme as to constitute an alteration of the character of the room should have been called to the attention of the inspectors by the owner's representatives. While the SOLAS provisions with respect to the requirement of a sprinkler head in such a space are unclear, if such conditions did exist, it would appear that the Coast Guard and the American Bureau of Shipping might well have demanded its installation before granting certificates to the vessel.

Regulation 17 of the Safety of Life at Sea Convention of 1960 reads:

ACCEPTANCE OF CERTIFICATES

Certificates issued under the authority of a contracting Government shall be accepted by the other Contracting Governments for all purposes covered by the present convention. They shall be regarded by the other Contracting Governments as having the same force as certificates issued by them.

Regulation 19 of the Safety of Life at Sea Convention of 1960 reads:

CONTROL

Every ship holding a certificate issued under Regulation 12 or Regulation 13 is subject in the ports of the other Contracting Governments to control by officers duly authorized by such Governments insofar as this control is directed towards verifying that there is on board a valid certificate. Such certificate shall be accepted unless there are clear grounds for believing that the condition of the ship or of its equipment does not correspond substantially with the particulars of that certificate. In that case, the officer carrying out the control shall take such steps as will ensure that the ship shall not sail until it can proceed to sea without danger to the passengers or the crew. In the event of this control giving rise to intervention of any kind, the officer carrying out the control shall inform the Consul of the country in which the ship is registered in writing forthwith of all the circumstances in which intervention was deemed to be necessary, and the facts shall be reported to the Organization.

The SOLAS 1960 provisions quoted above reflect in substance similar provisions incorporated in the SOLAS Convention of 1948. These provisions have given the United States considerable concern, possibly more so than any other provisions of the safety conventions with the exception of the "escape clauses." It can be said that these control regulations, limited as they are, were included primarily upon the insistence of the United States. The international viewpoint is that all signatories must have faith in the proper administration by the authorities of other administrations and therefore certificates granted to any ship should be accepted as *prima facie* evidence of

compliance. International diplomacy notwithstanding, contrary experience has dictated the United States to its realistic insistence upon a measure of control. True, these control provisions are a compromise in the treaty, and far from what the U.S. Government, management, and labor would have desired.

As explained in the discussion of international safety standards, the fire hazardous foreign passenger ship will not be completely eliminated from service in U.S. ports until all passenger ships in operation embody the standards of method No. 1. It can, however, take certain actions to require fireworthiness upgrading on existing passenger ships. This could be done by a firm insistence—enforced through a broad interpretation of the control provision—that certain minimum features must be incorporated in existing foreign-flag passenger ships operating in and out of our ports. These are outlined in recommendation No. 3.

For example, a substandard, foreign passenger ship not being fitted, among other things, with an automatic sprinkler system should be declined clearance carrying passengers from U.S. ports. True, such action was not contemplated by the drafters of the control provision because it was expected that upgrading such as this would be done under the practicable and reasonable clause. When the U.S. Coast Guard finds upon examination that no upgrading has been accomplished, it is the opinion of this Board that there is clear evidence that the ship does not correspond substantially with the obligations of the convention.

This would unquestionably eliminate several substandard ships, especially in the cruise trade. It is not anticipated that such action would adversely affect the ships of established foreign lines of the traditional maritime countries. It would provide greater safety for the traveling public without the undue delay pending formal and diplomatic solution of the problem through IMCO, which under favorable conditions would take years to accomplish.

True, a signatory nation has no right to refuse clearance when the conditions of SOLAS have been met. However, one condition of the international conventions which has been an obligation of each administration since 1929 with respect to their existing passenger ships has been to consider the arrangements on each ship "with a view to improvements being made to provide increased safety where practicable and reasonable."

We believe that when no upgrading has been accomplished on the ships in question that it is, in effect, an abrogation of the convention that would be most difficult for a foreign owner or government to defend.

The Board is of the opinion that such action would be justified and so recommends. It believes that enforcement of such a rule would hasten the replacement of at least some of the over-age fire-hazardous vessels presently operating from our shores.

5. CLASSIFICATION SOCIETIES, CONTROL

Classification societies such as the American Bureau of Shipping primarily exist to regulate the world shipping industry so far as its vessels are concerned. The classification societies are particularly concerned with the structural sufficiency of the hull and the reliability

of machinery.²⁴ Shipbuilders, shipowners, and governments, among others, adopt as standard the certificates as issued by the classification societies throughout the years.

Features pertaining to stability, subdivision, and the materials employed in the construction of passenger ships to prevent or retard the spread of fire are normally regulated by governments. However, the rules of the classification societies recognize the existence of fire risk and include in their requirements for the construction and maintenance of classed vessels specifications for fire extinguishing systems with this in mind. The rules cover, among other items, pumps, hydrants and hoses, foam and CO₂ systems, all aimed at fire control.

The question arises if it would not be desirable to have the classification societies establish standards of fireworthiness construction in the same efficient manner as they now do for hull and machinery of classed vessels. This could be extended to surveys after construction to examine firefighting equipment periodically, in greater detail than is the practice now, to coincide with certain classification surveys. It would seem desirable if the classification societies could denote fireworthiness in their registers as well as the conventional classification symbols covering hull or machinery. It is well realized that such a task would be a very difficult one and would involve a very comprehensive study, and thereafter international collaboration among the classification societies would be desirable.

To put the foregoing into effect would be a departure from normal practice for the classification societies and would mean that a classed vessel might have to maintain higher standards than those called for in the SOLAS Conventions in those aspects having to do with fire prevention. The Board believes this should be a subject of study by Government authorities and the classification societies themselves, but makes no specific recommendation thereon.

6. INTERNATIONAL SAFETY STANDARDS

International conferences on safety at sea seek to establish minimum safety standards acceptable in all signatory countries. There are many advantages to be derived from approaching maritime safety problems on a multilateral basis. A disadvantage, however, is that the standards resulting from these international conferences necessarily are a compromise which reflect only the measure of safety upon which it is possible to secure general agreement.

The participation of the United States in international safety conferences, without question, has improved the safety standards of foreign-flag ships, and in some respects those for U.S. ships. The United States persistently advocates its own higher standards for international adoption. However, in the matter of fire protection for foreign passenger ships, the United States has failed to achieve its goal.

The Intergovernmental Maritime Consultative Organization (IMCO) is the specialized agency of the United Nations concerned solely with maritime affairs. About 60 nations comprise its membership. It was organized because it was felt that the holding of diplomatic conferences from time to time (1914, 1929, 1948, 1960) was not often enough to deal adequately with the continuing problems of

safety at sea. IMCO's objectives are to facilitate cooperation among governments on technical matters affecting shipping, with special responsibility to insure that the highest possible standards of safety at sea are achieved.

IMCO's aims and objectives are deserving of universal support by all members of the United Nations. It has made progress in fulfilling its responsibilities in several areas. What is difficult to comprehend, however, is why more has not been accomplished to enhance the fireworthiness of passenger ships.

It is not difficult to specify standards of fireworthiness construction that would assure relative invulnerability against destruction of passenger ships by fire. Such standards were put forward by the United States for international adoption in 1948, and again in 1960. These are known in the international conventions as Method I. There has also been a second school of thought that places emphasis upon the reliability and efficiency of crews, together with facilities for detection and extinction rather than fireworthy construction. Both solutions to the fireworthiness problem have continued to be authorized under the SOLAS Conventions.

Not that marked improvement in the requirements for new construction has not been achieved. In fact, the incorporation of regulations detailing definite requirements for fire prevention was considered the outstanding accomplishment of the 1948 SOLAS Convention. Nevertheless, until the U.S. method of construction has been universally applied (which approaches the attainment of a fireproof ship), there can be no assurance that future disasters such as the *Yarmouth Castle* will not recur.

Since its inception over 5 years ago, IMCO's consideration of the fireworthiness of passenger ships has been limited to the establishment of a committee to study the problem. The precept for this committee study, which is limited to existing passenger ships, reads:

FIRE PROTECTION ON EXISTING SHIPS

To study fire protection on existing passenger ships which are not required to comply with relevant provisions of the 1948 and 1960 safety conventions with a view to indicating some simple, practicable steps which could be recommended to improve the fire safety on such ships.

The very language of these terms of reference is a clue that nothing much was expected to be accomplished. There are no "simple" means to properly protect the existing fire traps, nor in the opinion of many are there "practical" steps that can be taken in view of economic considerations. At the 10th session of the Maritime Safety Committee held in May 1964, the Commandant of the U.S. Coast Guard advocated that a high priority be assigned to the study of fire prevention on existing passenger ships. In addition, the Commandant submitted a form which he proposed be filled out for all passenger ships by each signatory nation to IMCO. These forms would indicate the degree of compliance or resort to "escape clauses." Neither proposal was approved by the Maritime Safety Committee. Even in December 1964, when the Fire Protection Committee convened for its first session, the use of the form as proposed by the U.S. delegation was rejected on the premise it would serve no useful purpose. It was argued that each signatory was aware of the condition of its own ships.

The failure of signatories to IMCO to consider the fire protection problem as one of priority, and for them not to be willing to make known the degree of compliance with applicable conventions, justifies our opinion that little, if any, upgrading has been accomplished on many existing pre-convention foreign ships.

In view of IMCO's aims and objectives, "to assure that the highest possible standards of safety at sea are achieved," that organization may well be criticized severely for its failure to do something about the serious fire hazard permitted by international agreement. These agreements not only permit pre-convention passenger ships to continue to operate, but permit the construction of new ships employing large quantities of combustible materials and fittings that will operate for decades to come. In connection with this overall problem we recommend a reading of the editorial published in the *British Shipbuilding & Shipping Record*, January 2, 1964, entitled "A Pre-Convention Passenger Ship" (app. A).

Admittedly, IMCO is engaged in many projects aimed to improve safety at sea, but none are of such importance as a project to improve the fireworthiness of the world's passenger fleet. IMCO's failure to proceed expeditiously can justly lead us to the conclusion that nothing of consequence was intended to be accomplished by its fire protection committee. In fact, when the U.S. delegation to the committee meeting in December 1964 cited the large percentage of American citizens traveling on foreign ships as a reason for its interest, the reaction was that the problem was a national one rather than international. Yet, when cruise bill legislation which would affect foreign passenger ships was proposed in the U.S. Congress, the matter of U.S. citizens traveling on foreign passenger ships was quickly claimed as a matter of international interest.

Following the *Yarmouth Castle* disaster, Chairman Garmatz wrote to the Honorable Dean Rusk (app. B), requesting as a matter of urgency, that the U.S. Government demand the convening of a new Safety of Life at Sea Conference under the auspices of IMCO. Appropriate diplomatic inquiries were instigated to this end. A meeting of the Maritime Safety Committee of IMCO met January 31 to February 4, 1966, in London.

Chairman Garmatz' letter to the Secretary of State triggered action as may be observed by the report of the Maritime Safety Committee dated February 4, 1966 (app. C). An Extraordinary Session of the Maritime Safety Committee has been called to meet in London May 2, 1966, for the sole purpose of considering amendments to the SOLAS Convention to improve the fireworthiness of new and existing passenger ships. Chairman Garmatz, Secretary Rusk, and the U.S. delegation to the recent IMCO meeting have been commended for the action now underway to consider this serious problem. This, in itself, reflects real progress in international affairs.

It may now be premature to prognosticate as to the final outcome. However, this Board would be remiss if it did not mention its pessimistic views based on experience. The end result of IMCO's action, it is feared, will again be a compromise. The sad part is that even though the position of the United States should be adopted at future meetings of IMCO, it would take years, through IMCO's procedures, before the higher standards would become effective. Even if the United States should denounce the Convention in order to legally free

itself for unilateral action, it would take upward of 5 years for this to become effective under provisions of the IMCO Convention. This undue delay prompts this Board to recommend the relatively more moderate action discussed in the limited control passage of this report (sec. 4).

The foregoing considerations prompt the Board to point out certain considerations which bear upon the future participation of the United States in IMCO.

It is interesting to note the Maritime Safety Committee in the 1948 IMCO Convention was composed of 14 members representing that number of states. The United States, by a provision of the Convention, was automatically assured of a seat on this important committee as long as it continued to be one of the eight largest ship-owning nations. At the fourth assembly meeting of IMCO, September 19-29, 1965, that body approved an increase in the number of members to the Maritime Safety Committee, all of which are to be elected. The remote possibility does exist that the United States may not be elected to this most important committee of IMCO. Another interesting provision of the IMCO Convention of 1948, remaining unchanged, upon which a country may be considered for election to the Committee reads:

For the purpose of this article, states having an important interest in maritime safety shall include, for example, states interested in the supply of large numbers of crews or in the carriage of large numbers of berthed or unberthed passengers.

This provision of the convention would not qualify the United States for election to the MSC but is quoted to focus attention on the fact there is no qualifying provision for the United States or other signatories supplying large numbers of its citizens as passengers. The effect of this, for example, is that say Cuba, should it supply a large number of its nationals as crews, would qualify Cuba for election to the MSC while eliminating the United States for consideration even though the passengers carried may be 100 percent U.S. citizens.

This amendment to the 1948 IMCO Convention will require U.S. ratification. This amendment is of such a nature (adopted under the provisions of art. 52) that any member which declares it does not accept it or thereafter fails to accept it within 12 months after it comes into force shall cease to be a party to the convention.

This passage is cited because in the minds of this Board it is most doubtful the United States would have been a signatory to this convention without positive assurance by a provision of the convention as to its status on the important committees of that organ.

It is our view that IMCO is performing a valuable service in improving safety standards on vessels and we believe that the United States should continue its membership. However, in this particular instance we believe that ratification by the United States should be with a reservation affording the Coast Guard a greater degree of safety standards on foreign-flag vessels frequenting our ports as heretofore set forth in our recommendations.

7. MANNING

The Safety of Life at Sea Conventions, past and present, provide:

The contracting governments undertake each for its national ships, to maintain, or, if it is necessary, to adopt measures for the purpose of insuring that, from the

point of view of safety of life at sea, all ships shall be sufficiently and efficiently manned.

Among seafaring people it is often recognized that an unseaworthy ship "sufficiently and efficiently" manned is a safer ship than one insufficiently and inefficiently manned. There is no question but U.S. passenger ships meet the criterion of being properly manned. This contributes an added factor in no small measure to the superior safety of U.S. passenger ships. There is little evidence that the *Yarmouth Castle* was efficiently manned and operated when it met with disaster. From the testimony adduced the normal functions to meet an emergency were not discharged; that is:

1. Lack of supervision by master and other ship's officers.
2. The general alarm was not sounded.
3. The emergency squad did not muster.
4. Only 6 lifeboats of 13 on board were launched.
5. Swimming pool valve from fire pump was open causing inadequate pressure at the hose nozzles.
6. Public address system was not utilized.
7. The master was among the first to leave in the first lifeboat away.
8. Failure to radio for assistance.

This is intended as a condemnation of the ship's organization, not the individuals, as there is evidence of heroic action on the part of individual members of the crew. However, the master and officers as well as management have a responsibility to see that the crew is properly trained to cope with an emergency as expected of them by the manning provision of the convention. Also, the shoddy housekeeping condition noted in room 610, a suspected location of the origin of the fire as previously discussed, cannot escape notice. This factor of proper training should receive greater emphasis at the international level.

The United States has enacted legislation resulting in a situation where there are few, if any, seamen on U.S. passenger vessels not conversant in the English language.

Foreign-flag passenger ships are sailing with crews of many nations, more so than the *Yarmouth Castle*, on which several nationalities were represented—from the Greek master on down to a crew from Cuba, Jamaica, Bahamas, Honduras, and so forth.

At the hearing following the disaster many of the witnesses appearing before the Coast Guard Board of Investigation required interpreters.

With such a crew on the *Yarmouth Castle*, there is little wonder of its disorganized effort to cope with the emergency that overtook that ship on November 13, 1965. This suggests that perhaps the question of capability for reasonable intercommunication between the responsible officers and the members of the crew for purposes of effective ship organization might also need some consideration at the international level.

8. PASSENGERS, WARNINGS TO

The unsuspecting public who pay for passage have every right to believe that the passage procured is a safe one. It is under the impression the authorities of the Government are charged with that responsibility. Elsewhere in this report it is shown that, because of

so-called "escape" provisions in international treaties, this may be an incorrect premise. Legislative action in some form would be in order to alert passengers traveling on substandard ships. U.S. maritime unions, although accused of self-interest, are commended by this Board for their efforts in this regard.

The above should not be considered the end to the problem. Despite warnings against the hazards of cigarette smoking, the consumption is increasing. So will the public continue to disregard potential dangers in ocean travel and patronize foreign ships in increasing numbers. Unfortunately, in the United States they have little choice because of the diminishing number, an all-time low, of U.S. passenger ships.

9. TRANSFER OF FLAG

From the chronological history of the SS *Yarmouth Castle* (appendix D), it may be noted that since 1941, except for short periods, this vessel was not operated in the passenger service under U.S. flag. Except for those short periods, it was either in the Army Transportation Service, operated by the Navy, or laid up. Then, when it was 28 years old in 1954 it was sold for foreign-flag operation. Ten years later, November 13, 1965, it met with disaster.

It is regrettable that not only the United States but other traditional maritime countries dispose of their outmoded ships by selling them to operators with apparent less interest in modern safety standards. They then continue to operate under certain foreign flags where they may continue to take advantage of the "escape clause" of the Safety of Life at Sea treaties and possibly fall into the hands of the unscrupulous operator and promoter.

Bear in mind the transfer of any foreign passenger ship to U.S. flag would entail compliance, not only with the latest SOLAS Convention, but also the higher U.S. laws and implementing regulations. Had other countries, for example Greece and Panama, required compliance with the minimum requirements of only the SOLAS Convention when transferred, without resort to escape clauses, there would have been no *Lakonia* or *Yarmouth Castle* incidents, because it would not have been feasible to comply with even these minimum standards. Thus, it appears quite clear it is the immunity from such safety standards that prolongs the life of these ships.

There is ample justification for a provision of a Safety of Life at Sea Convention to specify that any existing passenger ship, upon transfer of registry, be considered a new ship and be required to comply with the requirements of the latest SOLAS Convention.

Two examples may be cited. The Dutch SS *Johan Van-Olden-Barnevelt* was built in 1930 and sold some 30 years later to Greek interests. When operated under the Greek flag it met with disaster by fire with the loss of 125 lives—this was the *Lakonia*, destroyed by fire December 22, 1963. Eight officers were charged with negligence in the disaster. The crew, despite cases of self-sacrifice, failed to rescue sleeping passengers. The lifeboats were not launched in time and operations on deck were not supervised by responsible officers—this is set forth in the report of the investigation by the Greek authorities. However, what was not mentioned were the obvious deficiencies in fireworthiness.

Our second example is the *Yarmouth Castle* herself. From the chronological report (appendix D) it may be observed that when sold

by U.S. interests to foreign-flag operation there were several changes in ownership, certainly giving the impression of falling into the hands of promoters.

It is the loopholes in the treaties that permit the continued operation of these overaged, outmoded ships, lacking in modern fire prevention standards. Had the *Lakonia* and the *Yarmouth Castle* remained under the Netherlands and United States flags, there is little doubt that they would have long since been retired from service. The U.S. Coast Guard had the safety of human lives in mind when it established regulations requiring that ships transferred to U.S. flag would be considered for regulatory purposes as a new ship. We recommend the adoption of a similar rule for passenger vessels as an international requirement. This would discourage the transfer of foreign outmoded and unsafe vessels.

10. NATIONAL DEFENSE

According to recent studies of the current Administration, it is being advocated that the operation of passenger ships under U.S. flag be phased out. If these proposals are carried out, the existence of an American-flag passenger fleet, as we know it, is doomed. Balance of payments, national prestige and defense, in other words, our national interests are being forsaken by these proposals. It certainly does not appear that the U.S.S.R. is overlooking its national interest with its feverish buildup of the Soviet merchant marine—70 percent of which ships are less than 10 years old. The Soviet passenger fleet has 79 liners for travel abroad and hundreds for domestic use, and the construction of such ships continues. The United States has 27 such ships, the lowest number since the 1936 Merchant Marine Act. No new ones are building or even contemplated. Thus, for American citizens all we have to look forward to is dependence upon less safe foreign-flag ships for ocean transportation.

A shocking admission of the Defense Department is that it looks to foreign-flag substandard passenger ships such as the *Yarmouth Castle* for use in time of emergency. They have testified before the Congress concerning such ships, including the *Yarmouth Castle* itself, as "being a significant asset in Department of Defense planning to satisfy emergency sealift requirements." (Defense Department testimony in hearings on H.R. 2836, H.R. 6272, H.R. 10109, and H.R. 10327, Aug. 25, 1965.) These statements were made less than 3 months before this disaster.

The Nation is shocked at peacetime disasters at sea—but the bitter lessons learned are of even greater value in minimizing the unpublicized terrible losses attributed to war. Recklessness induced by war and the disregard for safety during such a period is based on the arbitrary premise that military necessities will always outweigh the normal hazard of the sea. We cannot agree with this premise. A man killed in or as a result of a shipboard casualty, such as fire or foundering, is just as dead as though he were killed by the shell of an enemy gun. For example, an overnight passenger ship, improperly subdivided and a fire risk, was employed in the last war to carry troops. En route to Greenland it was torpedoed; 675 perished. The British trooper *Rohna* caught fire after bombing in the last war and took a toll of over 1,000 U.S. troops.

This great United States should not unduly risk the lives of its troops and seamen. That is the great lesson upon which we are turning our backs. Should the emergencies of the past overtake us we will find this phase of our merchant marine once again a weak link in our national defense. Yet it is the likes of the *Lakonia* and *Yarmouth Castle* the theorists would depend upon in time of emergency—not only firetraps, but fast sinkers.

It is the view of this Board that the Department of Defense should review its planning with some evidence of consideration of safety which appears to be sadly overlooked when the foreign-flag ship must be depended upon.

11. RADIO PERFORMANCE

No radio distress call was sent out by the *Yarmouth Castle*. The radio room was in flames by the time the radio officer, who was off duty at the time, attempted to reach the radio room. He did, however, by direction of the master, activate a signal light from the bridge and flashed the distress signal, for a short time, with no response. In this connection, it was fortunate that the passenger vessel *Bahama Star* and the cargo ship *Finnpulp* were within sight of the burning vessel and proceeded to the scene. The *Finnpulp*, upon observing the flames and smoke about 7 miles distant, attempted to raise Nassau Radio Coast Station. Upon receiving no reply, a message was transmitted to the U.S. Coast Guard at Miami, Fla., advising that a burning ship had been sighted and giving the position. Coast Guard aircraft were dispatched to assist in rescue operations. Thereafter, both rescue vessels carried on radio communication between themselves and Coast Guard Miami. Radio communications were also handled between the Coast Guard aircraft, the *Bahama Star*, and the *Finnpulp*. It is of interest to note that this interchange included the use of radiotelephony on the radiotelephone distress radiofrequency of 2182 kilocycles per second.

An examination of the *Yarmouth Castle's* passenger ship safety certificate and the report of radiotelegraph installation from an inspection by the American Bureau of Shipping in June of 1965, indicate that the radiotelegraph installation requirements of SOLAS 1960 were met. From the data at hand there is no reason to believe that the radio installation would not have also met the basic U.S. radio requirements, except for the number of radio officers and hours of watchkeeping.

The entire radio complex on the *Yarmouth Castle* included the SOLAS required main and emergency radiotelegraph equipment located in the radio room, a required radiotelegraph installation in the motor lifeboat, and a portable radiotelegraph transmitter-receiver capable of being placed in a survival craft. In addition and on a voluntary basis, there was located in the radio room a radiotelephone capable of operation on the radiotelephone international distress frequency of 2182 Kc/s.

We are faced here with an unusual and extreme situation wherein the fire and accompanying smoke and heat, almost simultaneously placed all the radio equipment (including the installation in the motor lifeboat) in an inaccessible and inoperative position. This occurred in spite of the fact that both SOLAS and the Communications Act

require the radio room to be located as high as possible in the ship and in a position of the greatest possible safety. In the case of U.S. ships the location shall be approved by the Commandant of the Coast Guard. Accordingly, the question is raised as to whether there should be additional requirements concerning location and protection of the radio room and its contents, and the ability to operate any or all of the radio equipment in case of emergency.

Several suggestions aimed at this problem have come to the attention of the Board. They include such possibilities as:

(1) Remote control of the main and emergency radiotelegraph installation from the bridge or other appropriate location;

(2) Locating the emergency radiotelegraph apparatus (or as an alternative the installation of an additional emergency radiotelegraph installation) at a distance well removed from the radio room;

(3) A means of activation and control from the bridge of the radiotelephone when the radiotelephone is not physically located on the bridge; and

(4) Additional portable transmitter-receivers.

The Board is not in a position to evaluate these or other suggestions which may be offered or make specific recommendations on the subject. The Board does, however, believe that the problem is one having sufficient merit and importance to require study by the appropriate U.S. regulatory authorities, to be followed, if found necessary and desirable, by suitable recommendations for appropriate rules or legislation as well as amendments to SOLAS.

In addition to the radio installation and protection problems discussed above we consider comment is required as to the number of radio officers and hours of radio watch standing. Had the *Yarmouth Castle* been a vessel under U.S. flag she would have been required to carry two radio officers, and maintain a continuous radio listening watch while outside a harbor or port, by means of a human operator. In this connection, it is of interest to note the following from the report of the chairman of the U.S. Radio Committee at the SOLAS meeting in London 1960:

Passenger ship watches (radiotelegraph) were unchanged [from SOLAS 1948] except for minor editorial changes. The United States made a strong fight for its proposal to require continuous radiotelegraph listening watches on passenger vessels pointing out that a ship both gives and receives from a safety network. The United States was defeated on this proposal for frankly economic reasons.

The *Yarmouth Castle* conformed to SOLAS 1960 by carrying only one operator and maintaining only 8 hours radio listening watch by human operator. This is permitted when the voyage (such as Miami to Nassau) is less than 16 hours. In this case the radio officer had completed his 8-hour watch just a few minutes prior to discovery of the fire. Upon securing the radio room he had placed the autoalarm receiving equipment in operation. He was on deck in the vicinity of the radio room when he smelled smoke and went below to ascertain the source.

We can only speculate as to what the situation would have been had a human operator been in the radio room until he was forced out by the heat, smoke, or flames. Had the two rescue ships not been near, the loss of life would undoubtedly have been greater. The ship's radio equipment could have been the only means of alerting the outside world to its plight.

12. RADIO INSPECTION

The inspection of radio installations aboard foreign passenger ships within our waters (as well as U.S. ships) for compliance with law and treaty (in particular the Communications Act of 1934 and SOLAS 1960) comes within the jurisdiction of the Federal Communications Commission.

The Commission in 1954 was forced to discontinue routine inspection of U.S. cargo vessels and foreign convention-country (SOLAS) passenger and cargo vessels, including such ships as the *Yarmouth Castle*. It also ceased routine inspection of foreign ships registered in nonsafety convention countries and of U.S. vessels voluntarily equipped with radio. This was prompted by budgetary limitations brought about by a policy opinion of the Bureau of the Budget that the Commission should cut back its inspection program. It was the opinion of the Bureau that ship operators and insurance companies should assume greater responsibilities in these matters, and the Commission should seek other ways of attaining compliance with laws, such as certifications, bonds, etc. This policy is in effect today.

The Board does not agree with the philosophy of the Bureau of the Budget. Their policy, when announced, had the practical effect of eliminating not only the routine inspections of radio installations on foreign passenger vessels before they leave our waters, but applied the same principle to U.S. ships. The "inspection" to which we refer is an "on the spot" or "routine" determination by a Commission inspector that the ship radio installation is at least in operating condition. This type of inspection was carried out by the Commission and its predecessor agencies from the time of the Radio Act of 1910 until discontinued in 1953. We believe Commission records will show that during the period when these inspections were made there were many cases of foreign ships entering our ports with inoperative radio equipment, yet no attempt having been made to rectify the deficiency until made to do so by the inspector.

The public interest as well as national self-interest is involved here. There are two major reasons which should prompt the United States as a Government to assure that the radio equipment is at least in operating condition. This is a procedure entirely separate from determining compliance with laws, treaties, or regulations. First, every foreign passenger ship leaving one of our ports carries U.S. citizens. Therefore, we have a direct interest in the safety of that ship. Second, every foreign passenger ship (as well as all foreign cargo ships), upon leaving one of our ports, immediately becomes a potential lifeboat. It is subject to being called upon to aid any vessel which might be in distress in the area of the foreign ship concerned. This has been one of the basic concepts of all safety of life at sea treaties.

At sea, all vessels have a community of interest and are dependent upon each other in time of distress. Our concern over the lack of inspections does not reflect a lack of faith in the foreign governments involved. It is only commonsense for governments to assist each other, between the annual inspections for compliance, by checking on operating conditions. We believe the Commission would be under severe criticism if a foreign passenger ship left one of our ports with defective equipment and it was later found that this contributed to its loss or that it was unable to answer another ship in distress.

As stated above, such inspections have been a cardinal principle with this Government for many years. It should not be thrown away by the contrary policy set forth by the Bureau of the Budget.

Accordingly, the Board believes and so recommends, that the Commission should reestablish the former practice of inspections, at least of passenger ships both national and foreign, to determine that the radio installation is in operating condition.

13. SEARCH AND RESCUE

Every sea disaster immediately gives rise to the question as to what transpired from the point of view of search and rescue. In this case, the *Yarmouth Castle* was unable to transmit the radio distress signal and message as the radio room was in flames before the radio officer was able to reach the room. However, two vessels, the *Bahama Star* and the *Finnpulp*, attracted by the glare from the fire on the burning ship, proceed immediately to the scene, put over lifeboats and picked up passengers and crew from the water or directly from the *Yarmouth Castle* before she sank. The Coast Guard search and rescue coordinating system went into operation as soon as notified by the *Finnpulp* of the situation. Three aircraft, two helicopters, and two 95-foot cutters were dispatched from Coast Guard Florida bases. The aircraft released flares to illuminate the area of the disaster and assisted in coordinating the efforts of the rescue vessels. The two helicopters evacuated from the *Bahama Star* 11 severely burned or injured cases and transferred them to Bahama hospitals. They also brought back to the rescue vessels needed medical supplies. All who participated in this rescue operation remained true to the tradition of the sea by their all-out effort.

14. OTHER SAFETY CONSIDERATIONS

Throughout this report, and the Coast Guard investigation, the major concern has been that of the fire hazard on foreign passenger vessels. The Board would be remiss if it failed to point out that the Florida-Bahama runs are hazardous from the collision standpoint. The area concerned is heavily traveled with northbound and southbound traffic crossed by the cruise ships. Thus, a foreign passenger ship built to relatively inadequate subdivision standards could be equally perilous for the passengers, if not more so than the ship with substandard fireworthiness. The Board is concerned lest the next tragedy in this area may not be fire—but collision.

Unlike fireworthiness there is little that can be done to improve the subdivision of existing ships. Internationally the same escape clauses exist. In actuality, however, it is not realistic to upgrade the existing ship as it would entail redesign and reconstruction of the ship to meet modern subdivision and stability standards. Thus, this is an added urgent reason for the necessity of meaningful action which will eliminate these outmoded ships from this and similar trades at the earliest possible date.

To a degree it is believed that replacement of some existing tonnage is awaiting action of the U.S. authorities and the Intergovernmental Maritime Consultative Organization.

As for the specific problem of collision, it is of interest to note that the Coast Guard and Federal Communications Commission have jointly prepared legislation proposed to be submitted to the Congress which would have the effect of requiring U.S. ships to become fitted with VHF radiotelephone equipment for navigational safety. Although the proposed legislation would only apply to domestic waters, it is understood that plans are underway to seek similar action at the international level. Such action should be actively pursued as an important collision prevention measure.

We believe that there is another matter in a related field that requires immediate attention. There are still a number of overage passenger vessels with large amounts of inflammable material certificated by the Coast Guard for operation on our lakes, bays, and sounds. We recommend that immediate consideration be given, either by regulation or legislation, to the prompt retirement of these vessels as passenger carriers.

APPENDIXES

APPENDIX A

A PRECONVENTION PASSENGER SHIP

[From Shipbuilding and Shipping Record, Jan. 2, 1964]

Since the loss of the *Titanic* in 1912 there have been four international meetings in London on safety of life at sea, each leading to the signing of a safety convention. Prominent among the questions dealt with at these conferences has been the construction of passenger ships so as to prevent the outbreak of fire on board, and means to limit the spread of any fire which may occur and its speedy extinguishment. The convention drafted in 1914 never came into operation owing to the outbreak of the First World War, but that of 1929 was soon ratified by the 18 countries represented at the conference. When the convention was reviewed in 1948 few changes were made to the comprehensive requirements for subdivision, stability, and structural strength of passenger ships, but much was done on the question of structural precautions against fire, to which further requirements were added in 1960. As it was impracticable to apply all the new construction requirements to existing ships, the 1929 convention was made to apply only to new ships, which were defined as ships the keels of which were laid on or after July 1, 1931. As the ill-fated Greek passenger liner *Lakonia* was built in 1930, she did not of course rank as a new ship and can thus be said to be "pre" all safety conventions.

It gives food for thought that a vessel carrying so many passengers should have continued to find profitable employment for well over 30 years in face of the substantial advances that have been made in ship construction over that period and the greatly increased safety requirements imposed in the 1929 and 1948 conventions. Or is it, perhaps, that immunity from such requirements has prolonged the vessel's life? It may be pointed out that it is also a convention requirement that existing ships must be considered "with a view to improvements being made to provide increased safety where practicable and reasonable." But any substantial improvement would almost certainly involve very heavy expense, which is unlikely to be "reasonable" within the terms of the convention as interpreted by an administration naturally anxious to keep its shipping competitive with other flags.

Probably the greatest hazard that those on a well-found passenger ship will always have to face is a major fire at sea. Remote as the risk is, the Christmas-tide casualty demonstrates that it is by no means negligible. For the last case involving a British ship it is necessary to go back to the loss of the *Empire Windrush* in 1954. This ship had something in common with the liner *Lakonia*. Both were built on the Continent in 1930, and both served for long periods as troopships. It is even possible that their fires broke out in similar ways. That in the *Empire Windrush* started in the engine room, due, it was assumed at the inquiry, to the collapse of a plate in the main uptake causing incandescent material to fall and ignite oil in the engine room. Fortunately only four lives were lost; no doubt the fact that the passengers were servicemen contributed to the success of rescue operations.

Another major passenger ship fire was that on the *Empress of Canada* in January 1953. As she was a dead ship in dock, her case cannot be compared with those happening at sea, but it once again illustrated the difficulty of controlling a serious fire in a ship built before the 1929 Safety Convention, even with the aid of adequate shore appliances.

APPENDIX B

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
Washington, D.C., November 18, 1965.

Hon. DEAN RUSK,
Secretary of State, State Department,
Washington, D.C.

DEAR MR. SECRETARY: As you know, the House Merchant Marine and Fisheries Committee has recently concluded hearings and the House has passed H.R. 10327, a bill which, among other things, provides that the Federal Maritime Commission shall have available to it in connection with foreign-flag passenger vessels in the U.S. cruise trade "a warranty that the vessel to be employed in the ocean cruise will be in a seaworthy and safe condition at the time of the commencement of the ocean cruise, * * *". This legislation, relatively moderate in comparison with other proposals simultaneously considered, was a vehicle chosen by the House in an effort to protect the lives of American citizens and others in their ocean cruise travel.

Other versions of legislation under consideration provided in effect that foreign-flag passenger vessels "not only comply with foreign classification requirements but also are in substantial compliance with standards required of vessels of American registry."

Recourse was not taken to adopting the last-mentioned language, largely as a result of your Department's pointing out that we were signatories to the Safety-of-Life-at-Sea Convention, 1960, under which certain minimum international standards are enumerated. Your Department felt that to insist that foreign-flag vessels in this trade conform, in effect, to American standards could easily be interpreted as a violation of our treaty obligations.

As was also made known during the course of the hearings, preconvention ships were required to adhere to convention standards only "insofar as reasonable and practicable," a recognized escape clause.

I am certain that you will be mindful of the fact that neither I nor my colleagues on the committee intended embarrassing the Department in its international relations, and we therefore avoided imposing by national law any requirement which the Department felt would be in violation of our treaty obligations.

Nevertheless, it would appear that the standards imposed by these international treaties may not afford adequate protection for the passenger on the high seas should he travel in the cruise or other trades, be he a U.S. citizen or alien. I am sure that with the lessons of the very recent past, I am reflecting the views of the entire citizenry when I indicate to you that the U.S. Government should not be party to treaty obligations which allow passenger vessels of very minimal safety standards to participate in high seas traffic in and out of U.S. ports.

Under these circumstances, I think you will agree that it is of the utmost urgency that the U.S. Government demand the convening of a new Safety-of-Life-at-Sea Convention under the auspices of the International Maritime Consultative Organization. The sole purpose of this meeting would be to close any loopholes under which present bare minimum standard passenger vessels can trade in and out of the United States (or for that matter elsewhere). On the basis of available evidence, I appreciate the fact that the U.S. Government, as recently as December of 1964, sought, under the auspices of IMCO (Subcommittee on Fire Protection), to improve fireworthiness on existing passenger vessels.

Annex III of the Maritime Safety Committee, item 5, reads as follows:

"ANNEX III

"DRAFT TERMS OF REFERENCE FOR THE SUBCOMMITTEE ON FIRE PROTECTION

"5. To study fire protection on existing passenger ships which are not required to comply with the relevant provisions of the 1948 Safety Convention and to report back to the Maritime Safety Committee."

Unfortunately, foreign governments represented at IMCO chose to ignore the urgent pleas of our Government, and the matter which could most appropriately be handled by IMCO received minimal attention then and even today remains unattended.

The citizens of this land, in my judgment, are not disposed to having their life and limb jeopardized by the will of foreign governments whose vessels trade in and out of our ports. At the same time I would like this urgent issue to be handled internationally and in conformance with our foreign policy procedures as controlled by your Department.

It is crystal clear to me that our Government, as a dominant world force, is in a position to impress upon all other governments the essentiality of modernizing international safety standards as applicable to passenger vessels.

If we cannot prevail upon foreign governments to agree to the prompt convening of a new convention, or if the convening of a new convention should not result in appropriate and reasonable modifications in existing international passenger ship standards, it will obviously remain for the Congress of the United States to unilaterally establish such standards, at least insofar as the protection of the American traveling public is concerned.

Lacking concurrence in this regard by the foreign governments involved, I would urge upon you the denouncing of the Safety of Life at Sea Convention and withdrawal from the International Maritime Consultative Organization responsible for its formulation.

This is not as easy step to contemplate. I am, however, mindful of the fact that our Government only within the week denounced the Warsaw Convention dealing with airline liability in case of death or injury to passengers. This we did because of the reluctance of foreign governments to modernize the antiquated limitations of liability existing under that Convention. If the Government of the United States can take such a step and not deem its international relations torn asunder in connection with an issue of pure monetary limitation, it would seem to me to be infinitely more significant that all other steps unavailing, we contemplate doing the same in connection with the Safety of Life at Sea Convention wherein we are actually dealing with life and limb rather than pure fiscal considerations.

My committee intends examining the facts involved in the recent loss of the SS *Yarmouth Castle*. The initiation of the suggestions contained herein, however, should be undertaken immediately by the Department of State.

While this matter clearly falls principally under the purview of your Department, it is also of concern to the Department of the Treasury/Coast Guard and the Secretary of Commerce. I have, therefore, taken the liberty of sending a copy of this letter to them.

Sincerely,

EDWARD A. GARMATZ, *Acting Chairman.*

APPENDIX C

EXTRACT FROM REPORT OF THE MARITIME SAFETY COMMITTEE (IMCO)

FIRE PROTECTION OF PASSENGER SHIPS (MSC XII/30 AND MSC XII/30/ADD.1)

23. The Committee saw with great interest a film of the fire on the *Yarmouth Castle* and the consequent rescue operations by the U.S. Coast Guard.

The Government of the United States had submitted, as a matter of urgency, a paper drawing attention to the need, in the light of recent fire casualties resulting in serious loss of life, to reconsider the fire protection of passenger ships. That Government also submitted a statement which is reproduced as annex IV.

The Committee carefully considered this matter and the desire of the United States to hold a special session of the Committee devoted solely to the fire protection of passenger ships, which should continue with this subject until a consensus is achieved. In view of the serious nature of the matter under discussion and the possibility of arranging such a meeting, it was agreed that other meetings should, if necessary, be rearranged or postponed so as to accommodate the meeting schedule and budgetary responsibilities of the organization. The Committee decided to convene such a special session from noon of May 3 to May 6, if necessary to be extended to May 10. They further decided that this special session should be preceded by a session of the Subcommittee on Fire Protection to be held on May 2 until noon of May 3. Those members of the Subcommittee who were not members of the Maritime Safety Committee would, nevertheless, be invited to participate in the special session of the Maritime Safety Committee.

The special session of the Maritime Safety Committee would be concerned with both the development of proposals to improve the fire protection of existing passenger ships and with the amendment of the 1960 Safety Convention proposed by the United States of America whereby only Method I of structural fire protection would be permitted for new passenger ships. The Subcommittee would examine the proposals respecting existing passenger ships in a preliminary manner. (Approved February 4, 1966.)

APPENDIX

The following table gives a summary of the results of the experiments conducted during the year 1900, and shows the effect of the various factors on the rate of the reaction. The results are given in the form of a table, and the data are arranged in columns. The first column gives the number of the experiment, and the second column gives the time taken for the reaction to take place. The third column gives the volume of gas evolved, and the fourth column gives the weight of the substance used. The fifth column gives the weight of the substance which has been converted into gas, and the sixth column gives the weight of the substance which has been converted into liquid. The seventh column gives the weight of the substance which has been converted into solid, and the eighth column gives the weight of the substance which has been converted into gas, liquid, and solid. The ninth column gives the weight of the substance which has been converted into gas, liquid, and solid, and the tenth column gives the weight of the substance which has been converted into gas, liquid, and solid. The results of the experiments are given in the following table:

TABLE I.

APPENDIX D

CHRONOLOGICAL HISTORY OF THE SS "YARMOUTH CASTLE"

A brief chronological history of the SS *Yarmouth Castle* (ex *Evangeline*) follows:

1927. Delivered by builder, William Cramp & Sons Ship & Engine Building Co. of Philadelphia, to Eastern Steamship Co. of Boston.
- 1927-32. Operated in International and U.S. coastwise service under U.S. flag by Eastern Steamship Co.
- 1933-37. Operated in international coastwise service under U.S. flag by Nova Scotia Steamship Corp., a subsidiary of Eastern Steamship Co.
- 1938-41. Operated in international and U.S. coastwise service under U.S. flag by Eastern Steamship Lines, Inc.
- 1942-46. Delivered to War Shipping Administration under time charter in January 1942. Delivered to Eastern Steamship Lines under general agency agreement in March 1942 and operated in Caribbean area. Delivered to War Department on bareboat charter in August 1942. After repair and conversion, was placed in service with Army Transport Service, which operated her until 1946, except for the period January-April 1945 when she was operated by the Navy. She saw transoceanic service in both the Atlantic and Pacific under Army Transport Service. In February 1946 was delivered on general agency agreement to Eastern Steamship Lines. Restored to regular commercial operation by Eastern in July 1946.
1947. Underwent \$1,704,170 reconditioning which included necessary repair and replacement in deck and engine departments and refinishing of passenger areas. Returned to service with Eastern, U.S. flag.
- 1948-1953. Laid up at New York by Eastern. Except for 2½ months of service on a New York-Nassau-Grand Bahama run in 1950, she remained laid up through 1953.
1954. On April 22, 1954, was sold to Evangeline Steamship Co., a wholly owned Liberian subsidiary of Eastern, and was placed under Liberian flag and registry. During summer of 1954 she ran in Boston-Yarmouth service under Liberian flag. On November 8, 1954, was sold by Evangeline Steamship Co. to Volusia Steamship Co., a Liberian corporation wholly owned by W. R. Lovett, a U.S. citizen. During winter of 1954 she ran in the Miami-Nassau cruise trade.
- 1955-1957. On January 6, 1955, was sold by Volusia Steamship Co. to Jefferson Steamship Co., another Liberian corporation, also wholly owned by W. R. Lovett. On August 12, 1955, Lovett sold all stock in Jefferson Steamship Co. to McCormick Shipping Corp., a Panamanian corporation controlled by Frank Fraser, a British subject. Vessel remained under Liberian flag and registry and was operated by Jefferson in Miami-Havana-Nassau service.
1958. On January 15, 1958, ownership was transferred by Jefferson Steamship Corp. to McCormick Shipping Corp., with concurrent transfer of flag and registry from Liberia to Panama.
1962. On January 19, 1962, was sold by McCormick Shipping Corp. to Evangeline Steamship Co., S.A., a Panamanian corporation owned by W. R. Lovett.
1964. On June 17, 1964, was sold by Evangeline Steamship Co., S.A., to Chadade Steamship Co., Inc., a Panamanian alien-controlled corporation. Panamanian flag and registry were retained, but name was changed from *Evangeline* to *Yarmouth Castle*.

NOTE.—(See 1964) Chadade Steamship Co., Inc., was organized under laws of Panama on April 16, 1964. All of its stock was owned by Commander Investments, Ltd., a Bahamian corporation, which in turn was wholly owned by Jules

Sokoloff, a Canadian citizen. According to current information received, however, the stock in Chadade Steamship Co., Inc., is now owned directly by Jules Sokoloff and not through Commander Investments, Ltd.

Description of ship

Length overall	379'3".
Beam	55'8".
Draft	20'11½".
Gross tonnage	5,002.
Speed	16½ knots.





